TRITERPENIC ACIDS DERIVATIVES OF LICORICE AS DENGUE AND ZIKA VIRUSES INHIBITORS

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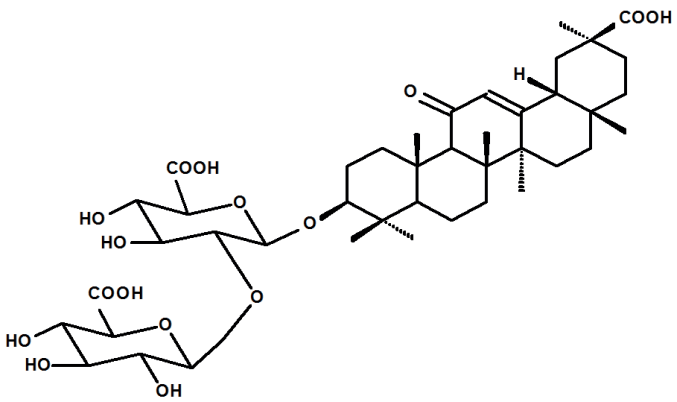
The search of new antivirals for the treatment of viral infections is currently one of the socially and economically important tasks of modern chemistry and medicine due to the widespread HIV infection, viral hepatitis B and C and the emergence of new viral infections such as influenza A/H1N1, Ebola, Dengue, Chikungunya, Zika, etc. The preferred strategy of modern medical chemistry to create new antiviral agents is the use as scaffolds available plant secondary metabolites with proved activity[1].

This work is devoted to the synthesis of a focused library of licorice *(Glycyrrhiza glabra L., Gl. Uralensis Fisher)* triterpenic acids derivatives, Glycyrrhizic acid (GL) (1) and its aglycone Glycyrrhetinic acid (GA) (2), and antiviral screening of the resulting products against Dengue (DENV) and Zika (ZIKV) viruses *in vitro.* Hydrazide-hydrazones, amino acid and dipeptide conjugates of GL were synthesized for the structure-activity studies. Benzal hydrazides and heterocyclic derivatives were obtained by modification of GA. Highly active compounds inhibiting the cytopathic effect, infectivity and the release of DENV and ZIKV viruses i*n vitro* were found among GL and GA derivatives produced for the first time.



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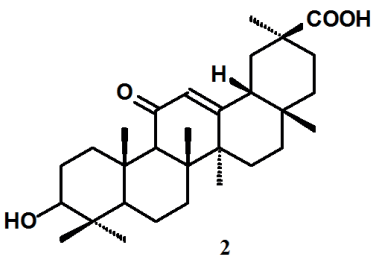

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Reference
1. Martinez J.P., Sasse F., Bronstrup M., Diez J., Meyerhans A. Nat. Prod. Rep., 2015, 32, 29.

This study was carried out according to the state assignment AAAA-A18-118020590121-6 and RFBR and Taiwan project 18-53-52004_a.